

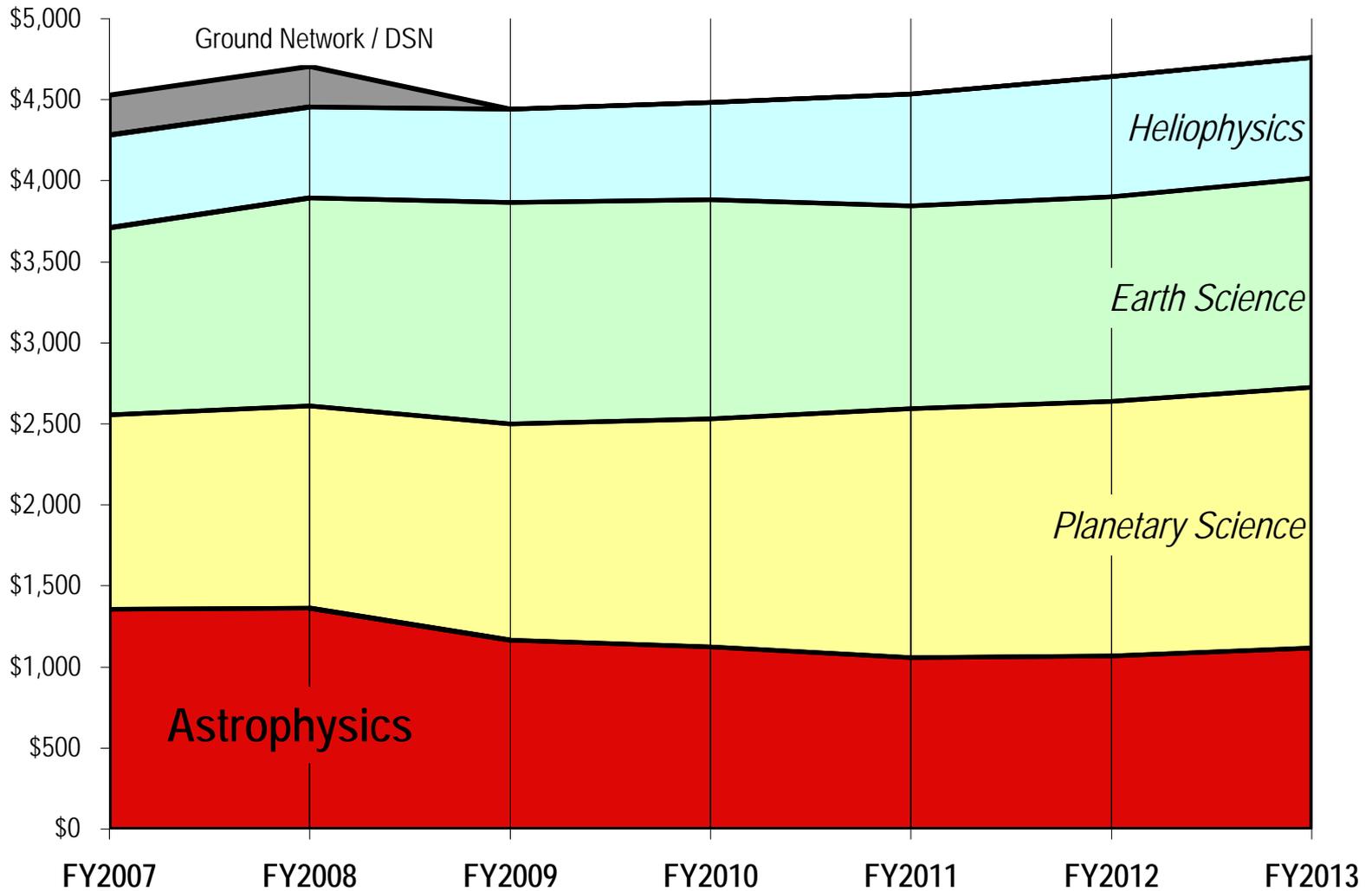
NASA's Exoplanet Exploration Program

Presented to the
Exoplanet Forum 2008

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SMD Budget by Science Theme



Numbers from President's FY09 Budget Request

Astrophysics Budget Restructure Crosswalk

Current Structure

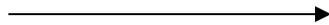
Navigator
Discovery (Kepler)



JWST Spitzer
HST Herschel
SOFIA



Beyond Einstein
GLAST Chandra
JDEM Planck



Astrophysics
Explorer Missions



Astrophysics
Research



New Structure

Exoplanet Exploration

"Are we Alone?"

Cosmic Origins

"How did we get here?"

Physics of the Cosmos

"How does the Universe Work?"

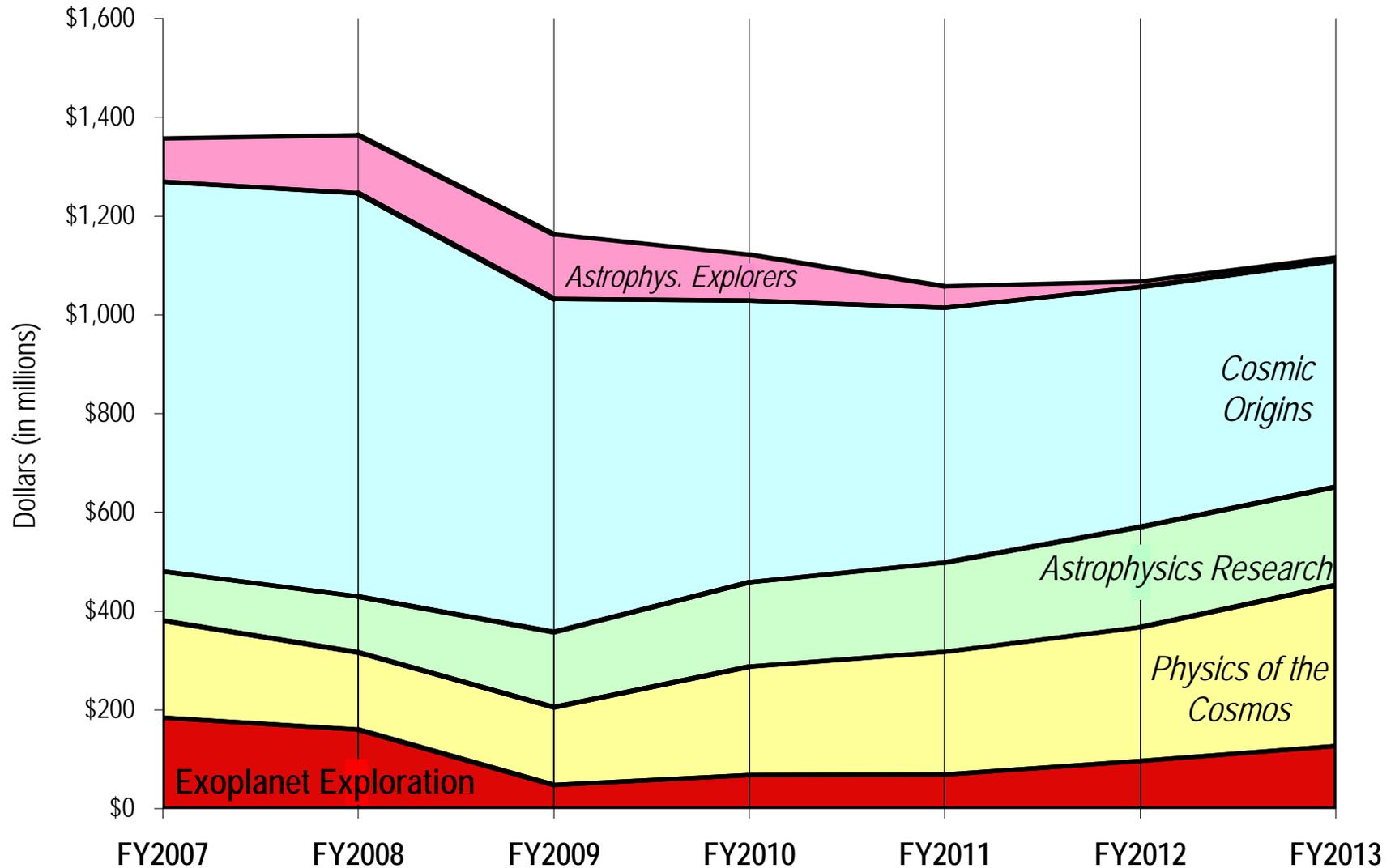
Astrophysics Explorers

Inc. missions in development and operations

Astrophysics Research

Suborbital projects, SR&T, Data Analysis, etc.

Astrophysics Budget by Science Theme



Numbers from President's FY09 Budget Request

Selected FY09 Astrophysics Budget Highlights

- **Physics of the Cosmos**
 - Fund a new start for JDEM (Dark Energy Mission) in FY09; continue LISA, Con-X, and Einstein Probe technology investments.
- **Cosmic Origins**
 - Accelerate SOFIA development in order to begin early limited science in 2009.
- **Astrophysics Research**
 - Fund a revitalized balloon and suborbital rocket program.
 - Augment astrophysics R&A.
- **Exoplanet Exploration**
 - Develop a Science/Technology Plan for presentation to Decadal Survey Panel;
 - Focus on a new medium class Exoplanet flight initiative; and
 - Complete development of a mission concept and cost study for SIM/SIM-Lite.

Backup

Astrophysics Program Content

	* FY07	* FY08	FY09	FY10	FY11	FY12	FY13
FY09 President's Budget *	1,356.8	1,363.5	1,162.5	1,122.4	1,057.1	1,067.7	1,116.0
Physics of the Cosmos	196.5	157.2	157.0	219.8	249.0	271.1	326.0
GLAST	84.4	41.9	23.2	23.3	24.1	24.9	24.9
JDEM		3.7	8.5	63.0	83.0	109.0	125.0
LISA	6.5	5.7	5.7	15.9	18.7	26.7	35.0
Constellation-X	8.3	8.1	8.3	12.0	16.8	15.9	42.0
Chandra	58.6	62.9	65.0	67.8	68.5	50.2	48.9
XMM	8.6	7.4	7.0	7.4	7.6	8.5	8.5
Herschel/Planck & Other	48.4	27.6	76.1	56.6	54.5	59.9	64.7
Exoplanet Exploration	184.6	159.5	48.1	67.7	68.4	96.4	126.2
SIM	30.4	24.3					
Kepler	121.8	79.5	25.2	14.9	13.9	12.6	8.8
Keck Operations	2.8	2.8	2.9	3.0	3.1	3.2	
TPF/EXEP Tech	8.0	7.5	6.7	6.3	6.4	7.5	8.7
Future Exoplanet Missions	1.0	23.8	6.6	41.7	44.0	72.0	107.5
Other	20.6	21.6	6.7	1.8	1.0	1.0	1.2
Cosmic Origins	788.9	816.9	674.4	571.1	515.4	485.6	458.5
James Webb Space Telescope	398.6	447.4	371.9	311.1	265.1	236.1	194.9
Hubble Space Telescope	277.5	230.2	154.9	125.6	114.7	94.8	93.9
SOFIA	38.9	64.0	72.8	72.8	57.0	58.8	60.6
Spitzer	73.8	75.4	71.7	15.9	10.3	3.2	3.3
Astrophysics Future Missions			3.0	45.8	68.3	92.7	105.8
Astrophysics Explorer	88.0	117.2	130.6	93.3	43.3	11.7	6.4
WISE **	52.9	72.7	65.2	13.0	5.2	1.6	
NuSTAR		16.7	41.5	57.8	31.0	6.8	6.4
Operating Explorers (Swift, Suzaku, RXTE, GALEX, WMAP)	35.1	27.8	23.9	22.5	7.1	3.2	
Astrophysics Research	98.8	112.6	152.3	170.4	181.0	203.0	198.9
Research and Analysis	52.2	56.6	61.4	65.4	69.3	72.6	77.5
Balloons	22.2	24.0	24.6	26.7	28.8	32.4	33.2
ADCAR	9.0	12.6	12.8	13.4	17.7	33.5	24.3
Other	24.5	19.4	53.5	65.1	65.2	64.4	63.8

* FY07 and FY08 reflect latest proposed Operating Plan, in FY09 structure

** Future Explorer budget in Heliophysics.